REMARKS/ARGUMENTS

Claims 1 through 17 are pending and have been examined. Claims 3, 15, and 16 were rejected under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the invention. Claim 7 was rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 4,261,051 ("Ohnushi"). Claim 10 was rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,307,868 ("Rakib"). Claims 1 through 6, and 11 through 16, were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,974,041 ("Kornfeld") in view of Rakib. Claims 8, 9 and 17 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kornfeld in view of U.S. Patent No. 6,054,894 ("Wright").

The Applicant has amended claims 3, 7, 8, 15, and 16 to correct errors in English grammar and usage, as well as to set forth more explicitly certain limitations that had had already been included in the claims prior to their amendment. These amendments have not, in any way, narrowed the scope of the amended claims. Attached hereto is a marked-up version of the changes made to the claims, captioned "**Version with markings to show changes made**."

In view of the claim amendments, and the remarks set forth below, the Applicant requests reconsideration of the Examiner's rejections.

I. Paragraphs 2 and 3: Rejection of Claims 3, 15, and 16 Under Section 112

In paragraphs 2 and 3 of the Office Action, claims 3, 15 and 16 were rejected under Section 112, ¶ 2. The Applicant has amended claims 3, 15, and 16 to more particularly point out and distinctly claim the invention. None of these amendments have in any way narrowed the scope of claims 3, 15 and 16. In view of these amendments, the Applicant requests that the rejection of these claims be withdrawn.

II. Paragraphs 4 and 5: Rejection of Claim 7

In paragraphs 4 and 5 of the Office Action, claim 7 was rejected under Section 102 as being anticipated by Ohnushi. Onushi, however, fails to disclose each and every limitation of claim 7. More specifically, for example, Onushi does not disclose the requirement of "a plurality of bit shifters that shift input baseband signals to the right by different certain bit."

Onushi discloses a level adjustment circuit formed using a conventional multiplier unit comprising a single shift register, two latches, an adder, three AND gates, and an OR gate. By contrast, the level adjusting circuit of claim 7 is formed without using a multiplier. Instead, the level adjusting circuit of claim 7 requires "a plurality of bit shifters that shift input baseband signals to the right by different certain bits" and "a plurality of switches for selecting outputs from said respective bit shifters in accordance with a gain desired to be set." By forming the level adjustment circuit without using a multiplier, the present invention has a lower power consumption than the conventional multiplier-based level adjustment circuit disclosed by Onushi. As a result, Onushi does not anticipate claim 7 of the present invention, and the rejection of claim 7 under Section 102 should be withdrawn.

III. Paragraph 6: Rejection of Claim 10

In paragraph 6 of the Office Action, claim 10 was rejected under Section 102 as being anticipated by Rakib. However, Rakib fails to disclose or suggest each and every limitation of claim 10. For example, claim 10 requires "calculating a gain set value with which an amplitude value of a multiplexed baseband signal matches a dynamic range in D/A conversion based on the number of transmission codes which is the number of mulitplexed baseband signals." Rakib does not disclose or suggest this limitation. Rather, in Rakib, a scalar amplifier 564 scales the amplitude level of the digital numbers in accordance with a signal which indicates how many timeslots are currently in use by the modem. In other words, in contrast to claim 10 which requires calculating a gain set value based on "the number of transmission

codes which is the number of multiplexed baseband signals," Rakib discloses adjusting amplitude levels based on the number of timeslots in use by the modem. Thus, Rakib does not anticipate claim 10, and the objection to this claim under Section 102 should be withdrawn.

III. Paragraphs 7 and 8: Rejection of Claims 1-6 and 11-16 Under Section 103

In paragraphs 7 and 8 of the Office Action, claims 1-6 and 11-16 were rejected under Section 103(a) as being obvious over Kornfeld in view of Rakib. The Applicant respectfully traverses this rejection, and requests that it be withdrawn.

Each of claims 1 through 6 and 11 through 16 includes a limitation that requires that the amplitude value of a signal be adjusted "to an amplitude value matching a dynamic range of said D/A converting means based on the number of transmission codes which is the number of multiplexed baseband signals." In the Office Action, it is conceded that Kornfeld does not disclose this limitation. To cure this deficiency in Kornfeld, the Office Action cites Rakib.

However, as was discussed in section II above, in connection with our response to the Office Action's rejection of claim 10, Rakib also fails to disclose or suggest the adjustment of amplitude values "based on the number of transmission codes which is the number of multiplexed signals."

Thus, even the combination of Kornfeld and Rakib fails to disclose or suggest each and every limitation of claims 1 through 6 and 11 through 16. As a result, the Office Action has failed to establish a *prima facie* case of obviousness with respect to these claims.

IV. Paragraph 9: Rejection of claims 8, 9, and 17

In paragraph 9 of the Office Action, claims 8, 9, and 17 were rejected over Kornfeld in

view of Wright.

Each of claims 8, 9, and 17 includes a limitation that requires that the amplitude value of a signal be adjusted "to an amplitude value matching a dynamic range of said D/A converting means based on the number of transmission codes which is the number of multiplexed baseband signals." In the Office Action, it is conceded that Kornfeld does not disclose this limitation. To cure this deficiency in Kornfeld, the Office Action cites Wright, specifically Figure 2 block 28, and the description starting on col. 8 line 63 and ending on col. 9, line 5.

However, the Applicant respectfully points out that the passages of Wright cited by the Office Action merely disclose an adaptive control processing and compensation estimator 28 that determines the remaining level of imperfection which has not been previously corrected in an analog "up conversion" process. See Wright at col. 8, lines 63-67. Nowhere in Wright is it either disclosed or suggested that amplitude values are adjusted "based on the number of transmission codes which is the number of multiplexed signals." Thus, even the combination of Kornfeld and Wright fails to disclose or suggest each and every limitation of claims 8, 9, and 17. As a result, the Office Action has failed to establish a *prima facie* case of obviousness with respect to these claims.

V. Conclusion

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue.

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Respectfully submitted,

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Version With Markings to Show Changes Made

In the Claims

3. (Amended) A baseband signal multiplexing circuit for multiplexing a plurality of baseband signals spread with different spread codes into one baseband signal, comprising:

a plurality of baseband filters for respectively limiting bands of the respective baseband signals input thereto;

a plurality of level adjusting [means] circuits for respectively adjusting amplitude values of the plurality of baseband signals with the bands limited by said respective baseband filters based on a plurality of control signals to output the signals;

an adding [means for] circuit adding and code-multiplexing the plurality of baseband signals outputted from said respective level adjusting [means] circuits to produce one baseband signal;

a D/A converting [means] circuit for converting the baseband signal which is a digital signal outputted from said adding [means] circuit into an analog signal; [and]

a gain setting [means] circuit [for] that:

[calculating,] calculates, for respective said level adjusting circuits, a gain set value with which an amplitude value of the baseband signal outputted from said adding [means] circuit is adjusted to an amplitude value matching a dynamic range of said D/A converting [means] circuit, said gain set value is based on the number of transmission codes, which is the number of multiplexed baseband signals, and said gain set value based on interchannel ratio information, said interchannel ratio information [for] specifying an amplitude ratio of the respective baseband signals when the plurality of baseband signals are multiplexed, and

[for notifying] notifies said level adjusting [means] circuit of the gain set values with said plurality of control signals.

7. (Amended) A level adjusting circuit comprising:

a plurality of bit [shift means for shifting] shifters that shift input baseband signals to the right by different certain bits;

a plurality of switches for selecting outputs from said respective bit [shift means] shifters in accordance with a desired gain desired to be set; and

an adder for adding outputs from said respective switches for output as one signal.

8. (Amended) A baseband signal multiplexing circuit for multiplexing a plurality of baseband signals spread with different spread codes into one baseband signal, comprising:

a plurality of baseband filters [for] respectively limiting bands of the respective baseband signals input thereto, and [for] adjusting amplitude values of the respective baseband signals based on a control signal to output the signals;

an adder [adding means for] adding and code-multiplexing the plurality of baseband signals with the bands limited by said respective baseband filters to produce one baseband signal;

a D/A [converting means for] converter converting the baseband signal which is a digital signal outputted from said [adding means] adder into an analog signal; and

a gain setting [means for] circuit calculating a gain set value with which an amplitude value of the baseband signal outputted from said adding [means] circuit is adjusted to an amplitude value matching a dynamic range of said D/A [converting means] converter based on the number of transmission codes which the number of multiplexed baseband signals and said gain setting circuit further [for] notifying [said] a level adjusting [means] circuit of the gain set value with said control signal.

15. (Amended) A method of controlling a transmission level in a baseband signal multiplexing circuit for multiplexing a plurality of baseband signals spread with different spread codes into one baseband signal, said method comprising [the steps of]:

limiting bands of the respective baseband signals input thereto;

adjusting respective amplitude values of the plurality of baseband signals with the limited bands based on a [specified] ratio <u>specifying an amplitude ratio of the respective baseband signals when the plurality of baseband signals are multiplexed</u>;

adding and code-multiplexing the respective baseband signals after the adjustment of the amplitude values to produce one baseband signal;

calculating a gain set value with which an amplitude value of the code-multiplexed baseband signal matches a dynamic range in D/A conversion based on the number of transmission codes which is the number of multiplexed baseband signals;

adjusting the amplitude value of the code-multiplexed baseband signal based on the gain set value; and

D/A converting the baseband signal after the adjustment of the amplitude value based on the gain set value into an analog signal.

16. (Amended) A method of controlling a transmission level in a baseband signal multiplexing circuit for multiplexing a plurality of baseband signals spread with different spread codes into one baseband signal, said method comprising [the steps of]:

adjusting respective amplitude values of the respective baseband signals input thereto based on a [specified] ratio <u>specifying an amplitude ratio of the respective baseband signals when the plurality of baseband signals are multiplexed</u>;

adding and code-multiplexing the respective baseband signals after the adjustment of the amplitude values to produce one baseband signal;

limiting a band of the code-multiplexed baseband signal;

calculating a gain set value with which an amplitude value of the baseband signal with limited band matches a dynamic range in D/A conversion based on the number of transmission codes which is the number of multiplexed baseband signals;

adjusting the amplitude value of the baseband signal with the limited band based on the gain set value; and

D/A converting the baseband signal after the adjustment of the amplitude value based on the gain set value into an analog signal.